



SEQUENCE LISTING

<110> Mitchell, Lloyd
Garcia-Blanco, Mariano M.
Puttaraju, Madaiah
Mansfield, Gary S.

<120> METHODS OF COMPOSITIONS FOR USE IN
SPLICEOSOME MEDIATED RNA TRANS-SPLICING

<130> A31304-BAE (072874.0156)

<140> 09/941,492

<141> 2001-08-29

<150> 09/838,858

<151> 2001-04-20

<150> 09/756,096

<151> 2001-01-08

<150> 09/158,863

<151> 1998-09-23

<150> 09/133,717

<151> 1998-08-13

<150> 09/087,233

<151> 1998-05-28

<150> 08/766,354

<151> 1996-12-13

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tccattcaaa aa 132

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29

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 <210> 24
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 <210> 25
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 <213> *Homo sapien*

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 <210> 27
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 <210> 28
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 <210> 29
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<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

<400> 29
ctgaggatcc tcttacctgt aaacgcccac actgac 36

<210> 30
<211> 38
<212> DNA
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<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<210> 31
<211> 38
<212> DNA
<213> Artificial Sequence

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<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<210> 33
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HCG6 gene (accession #X00266)

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<210> 34
<211> 38
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 <223> Oligonucleotide primer complimentary to the beta
 HCG6 gene (accession #X00266)

 <400> 34
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 <210> 35
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 <220>
 <223> Oligonucleotide primer complimentary to the beta
 HCG6 gene (accession #X00266)

 <400> 35
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 <210> 36
 <211> 37
 <212> DNA
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 <220>
 <223> Oligonucleotide primer complimentary to the beta
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 <400> 36
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 <400> 37
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 <210> 38
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 <220>
 <223> Oligonucleotide primer complimentary to the
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 <400> 38
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 <210> 39
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<400> 40
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<210> 41
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 <212> DNA
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<400> 41
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<210> 42
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 <212> DNA
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<400> 42
 acctctgcag acttcacttc taatgatgat 30

<210> 43
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 <213> Homo sapien

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<210> 44
 <211> 32
 <212> DNA
 <213> Homo sapien

<400> 44
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<210> 45
 <211> 35
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<400> 45
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<210> 46
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 <213> Homo sapien
 <400> 52
 aactagaagg cacagtcgag g 21
 <210> 53
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>

<223> Trans-spliced product containing human chorionic gonadotropin gene 6 sequences and Corynebacterium diphtheriae toxin A sequence

<400> 53

gagatgttcc agggcgtgat gatg

24

<210> 54

<211> 127

<212> RNA

<213> Artificial Sequence

<220>

<223> PTM intramolecular base paired stem

<221> misc_feature

<222> (57)...(70)

<223> Loop comprising a combination of 14 nucleotides according to the specification

<400> 54

gcuagccugg gacaaggaca cugcuucacc cgguuaguag accacagccc ugagccnnnn 60
nnnnnnnnnn aucguuaacu aaauaaacuac uaacuggggug aacuucuguu uuuuucucga 120
gcugcag 127

<210> 55

<211> 127

<212> RNA

<213> Artificial Sequence

<220>

<223> PTM intramolecular base paired stem

<221> misc_feature

<222> (57)...(70)

<223> Loop comprising a combination of 14 nucleotides according to the specification

<400> 55

gcuagccugg gacaaggaca cugcuucacc cgguuaguag accacagccc ugagccnnnn 60
nnnnnnnnnn aucguuaacu aaauaaacuac uaacuggggug aacuucugua uuauucucga 120
gcugcag 127

<210> 56

<211> 127

<212> RNA

<213> Artificial Sequence

<220>

<223> PTM intramolecular base paired stem

<221> misc_feature

<222> (57)...(70)

<223> Loop comprising a combination of 14 nucleotides according to the specification

<400> 56

gcuagccugg gacaaggaca cugcuucacc cgguuaguag accacagccc ugagccnnnn 60
nnnnnnnnnn aucguuaacu aaauaaacuac uaacuggggug aaguucuguc cuugucucga 120

gcugcag 127

<210> 57

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Trans-spliced product containing human chorionic gonadotropin gene 6 sequences and Corynebacterium diphtheriae toxin A sequences

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caggggacgc accaaggatg gagatgttcc agggcgctga tgatgttggt gattcttctt 60
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tccattcaaa aa 132

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<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial sequence derived from Escherichia coli lacZ gene

<400> 58

gaattcggta ccatgggg 18

<210> 59

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial sequence derived from Escherichia coli lacZ gene

<400> 59

cgtttacagg taagaggatc ctccggaggg ccc 33

<210> 60

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial sequence derived from Escherichia coli lacZ gene

<400> 60

tggtgtcaaa aataataagt taacaagctt 30

<210> 61

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Trans-spliced product containing Escherichia coli
lacZ and human chorionic gonadotropin gene 6
sequences

<400> 61
cagcagcccc tgtaaacggg gatac

25

<210> 62
<211> 286
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product containing Escherichia coli
lacZ gene sequences

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gtaacagtct tggcggtttc gctaaatact ggcaggcggt tcgtcagtat ccccgtttac 120
agggcggtt cgtctaataa tgggactggg tggatcagtc gctgattaaa tatgatgaaa 180
acgggcaacc cgtggtcggc ttacggcggt gattttggcg atacgccgaa cgatcgccag 240
ttctgtatga acggtctggt ctttgccgac cgcacgccgc atccag 286

<210> 63
<211> 196
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product containing Escherichia coli
lacZ gene sequences

<400> 63
ggctttcgct acctggagag acgcgcccgc tgatcctttg cgaatacgcc cacgcgatgg 60
gtaacagtct tggcggtttc gctaaatact ggcaggcggt tcgtcagtat ccccgtttac 120
aggggctgct gctgttgctg ctgctgagca tgggcgggac atgggcatcc aaggagccac 180
ttcggccacg gtgccc 196

<210> 64
<211> 500
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product comprising cystic fibrosis
transmembrane regulator-derived sequences and His
tag sequences

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aacgttgctc gagtactaac tggtagctct tctttttttt cctgcagact tcacttctaa 120
tgatgattat gggagaactg gagccttcag agggtaaaat taagcacagt ggaagaattt 180
cattctgttc tcagttttcc tggattatgc ctggcaccat taaagaaaat atcatctttg 240
gtgtttccta tgatgaatat agatacagaa gcgtcatcaa agcatgccaa ctagaagagc 300
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actggactag tggatccgag ctcggtacca agcttaagt taaaccgctg atcagcctcg 420
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ctggaagggtg ccaactcccac 500

<210> 65
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Splice junction sequence

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20

<210> 66
<211> 6
<212> PRT
<213> Artificial Sequence

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<223> Artificial sequence comprising sequences derived
from Escherichia coli lacZ gene

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Asp Tyr Lys Asp Asp Lys
1 5

<210> 67
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial sequence comprising sequence derived
from Escherichia coli lacZ gene

<400> 67
ggagttgatc ccgtc

15

<210> 68
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial sequence comprising sequences derived
from Escherichia coli lacZ gene

<400> 68
gcagtgtcct tgtgcggtta ccctgcaggg cggttc

37

<210> 69
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<212> DNA
<213> Artificial Sequence

<220>
<223> PTM binding domain of PTM

<400> 69

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tattaactca tttgattcaa aatattttaa atacttcttg tttcatactc tgctatgcac 120

<210> 70
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<212> DNA
<213> Artificial Sequence

<220>
<223> Spacer sequence of PTM

<400> 70
aacattatta taacgttgct cgaa 24

<210> 71
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Branch point, pyrimidine tract and acceptor splice
site of PTM

<400> 71
tactaaactgg tacctcttct tttttttttg atatcctgca gggcggc 47

<210> 72
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> Donor site and spacer sequence of PTM

<400> 72
tgaacggtaa gtgttatcac cgatatgtgt ctaacctgat tcgggccttc gatacgctaa 60
gatccaccgg 70

<210> 73
<211> 260
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of spacer sequence

<400> 73
tcaaaaagtt ttcacataat ttcttacctc ttcttgaatt catgctttga tgacgcttct 60
gtatctatat tcatcattgg aaacaccaat gatttttctt taatggtgcc tggcataatc 120
ctggaaaact gataacacaa tgaaattctt ccaactgtgct taaaaaaacc ctcttgaatt 180
ctccatttct ccataatca tcattacaac tgaactctgg aaataaaacc catcattatt 240
aactcattat caaatcacgc 260

<210> 74
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
 <223> Oligonucleotide primer

 <400> 74
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 <210> 75
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 75
 actcagtgtg attccacctt ctc 23

 <210> 76
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 76
 gacctctgca gacttcactt ctaatgatga ttatgg 36

 <210> 77
 <211> 33
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide primer

 <400> 77
 ctaggatccc gttcttttgt tcttcactat taa 33

 <210> 78
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 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide primer

 <400> 78
 ctagggttac cgaagtaaaa ccatacttat tag 33

 <210> 79
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide primer

 <400> 79

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<210> 80	
<211> 37	
<212> DNA	
<213> Artificial Sequence	
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<210> 81	
<211> 23	
<212> DNA	
<213> Artificial Sequence	
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<223> Binding domain of PTM molecule	
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acccatcatt attaggtcat tat	23
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<211> 22	
<212> DNA	
<213> Artificial Sequence	
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<223> Oligonucleotide primer	
<400> 82	
gatcaaattct gtcgatcctt cc	22
<210> 83	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Oligonucleotide primer	
<400> 83	
ctgatccacc cagtcccatt a	21
<210> 84	
<211> 22	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Oligonucleotide primer	
<400> 84	
gactgatcca cccagtcca ga	22
<210> 85	
<211> 52	

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Random sequence inserted to replace 3' splice site

 <221> misc_feature
 <222> (7)...(30)
 <223> spacer sequence, see SEQ ID NO: 70

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 ccgcggnnnn nnnnnnnnnn nnnnnnnnnn gggttcgggt accggcggct tc 52

 <210> 86
 <211> 71
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide primer

 <400> 86
 ttttatcccc gtttacaggg cggcttcgct tgggactggg tggatcagtc gctgattaaa 60
 tatgatgaaa a 71

 <210> 87
 <211> 66
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 87
 tttagcgata cgccgaacga tcgccagttc tgtatgaacg gtctggtctt tgccgaccgc 60
 acgccg 66

 <210> 88
 <211> 192
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> PTM sequence

 <400> 88
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 tccggccgca tcagcttttg cagccaattc agttggatca tgcccgtac catcaaggag 120
 aacataatct tcggcgtcag ttacgacgag taccgctatc gtcggtgat taaggcctgt 180
 cagttggagg ag 192

 <210> 89
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

<400> 89
 gagcaggcaa gacgagcttg ctcac 25

 <210> 90
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 90
 gagaacataa tcttcggcgt cagttacg 28

 <210> 91
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 91
 gtcagttgga ggaggacatc tccaagtttg 30

 <210> 92
 <211> 192
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> PTM exon 10

 <400> 92
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 tccggccgca tcagcttttg cagccaattc agttggatca tgcccgggtac catcaaggag 120
 aacataatct tcggcgtcag ttacgacgag taccgctatc gtcggtgat taaggcctgt 180
 cagttggagg ag 192

 <210> 93
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> PTM sequence

 <400> 93
 aaatatcatt ggtgtttctt atgatga 27

 <210> 94
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 94

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<223> Oligonucleotide	
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atgatcatgg gcgagttaga accaagtgag	30
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aaaatatcat ctttggtggt tcctatg	27
<210> 97	
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<400> 97	
ccaactagaa gaggacatct ccaagtt	27
<210> 98	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
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<223> 5' Splice site	
<400> 98	
cgtttacagg taagtggatc c	21
<210> 99	
<211> 27	
<212> DNA	
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<223> 3' Splice site	
<400> 99	
ctgcagggcg gcttcgtcta ataattgg	27
<210> 100	
<211> 47	

<212> DNA
<213> Artificial Sequence

<220>
<223> Sequence from trans-splicing domain

<400> 100
tactaactgg tacctcttct tttttttttg atatcctgca gggcggc 47

<210> 101
<211> 1584
<212> DNA
<213> Artificial Sequence

<220>
<223> CFTR PTM

<400> 101
atgcagaggt cgcctctgga aaaggccagc gttgtctcca aacttttttt cagctggacc 60
agaccaattt tgaggaaaagg atacagacag cgcctggaat tgtcagacat ataccaaatc 120
ccttctgttg attctgctga caatctatct gaaaaatttg aaagagaatg ggatagagag 180
ctggcttcaa agaaaaatcc taaactcatt aatgcccttc ggcgatgttt tttctggaga 240
tttatgttct atggaatctt tttatattta ggggaagtca ccaaagcagt acagcctctc 300
ttactgggaa gaatcatagc ttcctatgac ccggataaca aggaggaacg ctctatcgcg 360
atztatctag gcataggcct atgccttctc tttattgtga ggacactgct cctacaccca 420
gccatttttg gccttcatca cattggaatg cagatgagaa tagctatgtt tagtttgatt 480
tataagaaga ctttaaaagct gtcaagccgt gttctagata aaataagtat tggacaactt 540
gttagtctcc tttccaacaa cctgaacaaa tttgatgaag gacttgcatg ggcacatttc 600
gtgtggatcg ctccctttgca agtggcactc ctcatggggc taatctggga gttgttacag 660
gcgtctgcct tctgtggact tggtttcctg atagtccttg ccctttttca ggctgggcta 720
gggagaatga tgatgaagta cagagatcag agagctggga agatcagtga aagacttgtg 780
attacctcag aaatgatcga gaacatccaa tctgttaagg catactgctg ggaagaagca 840
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tatgtgagat acttcaatag ctacgccttc ttcttctcag ggttctttgt ggtgttttta 960
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tgggaggagg gatattggga attatttgag aaagcaaaac aaaacaataa caatagaaaa 1260
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ctgaaagata ttaatttcaa gatagaaaga ggacagttgt tggcggttgc tggatccact 1380
ggagcaggca agacgagctt gctcatgatg atcatgggag agttagaacc aagtgaaggc 1440
aagatcaaac attccggccg catcagcttt tgcagccaat tcagttggat catgcccggt 1500
accatcaagg agaacataat cttcggcgctc agttacgacg agtaccgcta tcgctcggtg 1560
attaaggcct gtcagttgga ggag 1584

<210> 102
<211> 323
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-splicing domain of CFTR PTM

<400> 102
gtaagatata accgatatgt gtctaacctg attcgggcct tcgatacgtc aagatccacc 60
ggtcaaaaaag ttttcacata atttcttacc tcttcttgaa ttcatgcttt gatgacgctt 120
ctgtatctat attcatcatt ggaaacacca atgatatttt cttaaatggt gcctggcata 180
atcctggaaa actgataaca caatgaaatt cttccactgt gcttaatttt accctctgaa 240

ttctccattt ctcccataat catcattaca actgaactct ggaaataaaaa cccatcatta 300
ttaactcatt atcaaatacac gct 323

<210> 103

<211> 165

<212> DNA

<213> Artificial Sequence

<220>

<223> PTM Binding domain

<400> 103

gctagcaata atgacgaagc cgcccctcac gctcaggatt cacttgccctc caattatcat 60
cctaagcaga agtgtatatt cttatttcta aagattctat taactcattt gattcaaaat 120
atttaaaata cttctgtgtt cacctactct gctatgcacc cgcgg 165

<210> 104

<211> 225

<212> DNA

<213> Artificial Sequence

<220>

<223> Trans-splicing domain of CFTR PTM

<400> 104

aataatgacg aagccgcccc tcacgctcag gattcacttg ccctccaatt atcatcctaa 60
gcagaagtgt atattcttat ttgtaaagat tctattaact catttgattc aaaatattta 120
aaatacttcc tgtttcacct actctgctat gcacccgcgg aacattatta taacgttgct 180
cgaataactaa ctggtacctc ttcttttttt tttgatatcc tgcag 225

<210> 105

<211> 3069

<212> DNA

<213> Artificial Sequence

<220>

<223> CFTR PTM sequence

<400> 105

acttcacttc taatgatgat tatgggagaa ctggagcctt cagagggttaa aattaagcac 60
agtgggaagaa tttcattctg ttctcagttt tcttgagatta tgccctggcac cattaaagaa 120
aatatcatct ttggtgtttc ctatgatgaa tatagataca gaagcgtcat caaagcatgc 180
caactagaag aggacatctc caagtttgca gagaaagaca atatagttct tggagaaggt 240
ggaatcacac tgagtggagg tcaacgagca agaatttctt tagcaagagc agtatacaaa 300
gatgctgatt tgtattttatt agactctcct tttggatacc tagatgtttt aacagaaaaa 360
gaaatatttg aaagctgtgt ctgtaaaactg atgggctaaca aaactaggat tttggtcact 420
tctaaaaatgg aacattttaa gaaagctgac aaaatattaa ttttgcatga aggtagcagc 480
tattttttatg ggacattttc agaactccaa aatctacagc cagacttttag ctcaaaactc 540
atgggatgtg attctttcga ccaatttagt gcagaaagaa gaaattcaat cctaactgag 600
accttacacc gtttctcatt agaaggagat gctcctgtct cctggacaga aacaaaaaaa 660
caatctttta aacagactgg agagtttggg gaaaaaagga agaattctat tctcaatcca 720
atcaactcta tacgaaaatt ttccattgtg caaaagactc ccttacaat gaatggcatc 780
gaagaggatt ctgatgagcc tttagagaga aggctgtcct tagtaccaga ttctgagcag 840
ggagaggcga tactgcctcg catcagcgtg atcagcactg gccccacgct tcaggcacga 900
aggaggcagt ctgtcctgaa cctgatgaca cactcagtta accaagggtca gaacattcac 960
cgaaagacaa cagcatccac acgaaaagtg tcactggccc ctcaggcaaa cttgactgaa 1020
ctggatatat attcaagaag gttatctcaa gaaactggct tggaaaataag tgaagaaatt 1080
aacgaagaag acttaaagga gtgctttttt gatgatatgg agagcatacc agcagtgact 1140
acatggaaca cataccttcg atatattact gtccacaaga gcttaatttt tgtgctaatt 1200

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tcgaaaattt	tacaccacaa	aatgtttacat	tctgttcttc	aagcacctat	gtcaaccctc	1500
aacacgttga	aagcaggtgg	gattcttaat	agattctcca	aagatatagc	aattttggat	1560
gaccttctgc	ctcttaccat	atctgacttc	atccagttgt	tattaattgt	gattggagct	1620
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cttcgtgcct	tcggacggca	gccttacttt	gaaactctgt	tccacaaaagc	tctgaattta	1860
catactgcc	actggttctt	gtacctgtca	acactgcgct	ggttccaaat	gagaatagaa	1920
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ggagaaggaa	gagttgggtat	tatcctgact	ttagccatga	atatcatgag	tacattgcag	2040
tgggctgtaa	actccagcat	agatgtggat	agcttgatgc	gatctgtgag	ccgagtcctt	2100
aagttcattg	acatgccaac	agaaggtaaa	cctaccaagt	caaccaaacc	atacaagaat	2160
ggccaactct	cgaaagttaa	gattattgag	aattcacacg	tgaagaaaga	tgacatctgg	2220
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gccatattag	agaacatttc	cttctcaata	agtcttgccc	agaggggtgg	cctcttggga	2340
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gcctttggag	tgataccaca	gaaagtattt	attttttctg	gaacatttag	aaaaaacttg	2520
gatccctatg	aacagtggag	tgatcaagaa	atatggaaag	ttgcagatga	ggttgggctc	2580
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agaagaaactc	taaaacaagc	atctgctgat	tgcacagtaa	ttctctgtga	acacaggata	2820
gaagcaatgc	tggaatgcca	acaatttttg	gtcatagaag	agaacaaaagt	gcggcagtac	2880
gattccatcc	agaaaactgct	gaacgagagg	agcctcttcc	ggcaagccat	cagccctctc	2940
gacagggtga	agctcttttc	ccaccggaac	tcaagcaagt	gcaagtctaa	gccccagatt	3000
gctgctctga	aagaggagac	agaagaagag	gtgcaagata	caaggcttca	tcatcatcat	3060
catcattag						3069

<210> 106

<211> 131

<212> DNA

<213> Artificial Sequence

<220>

<223> Binding domain of mouse factor VIII PTM

<400> 106

ctcgagctta	cctgaactaa	tttttttagaa	tattaaaatc	ctaagctttt	atatctctat	60
ccctctatct	tttgctctct	atccaatttt	tattaaactta	gactttaaaa	agaaacttat	120
gagaaaaatt	t					131

<210> 107

<211> 71

<212> DNA

<213> Artificial Sequence

<220>

<223> Spacer sequence of PTM

<400> 107

ccgcggaaca	ttattataac	gttgctcgaa	tactaaactgg	tacctcttct	tttttttttg	60
atatcctgca	g					71

<210> 108

<211> 527
<212> DNA
<213> Artificial Sequence

<220>
<223> Chicken beta actin promoter sequences

<400> 108
ccatggtcga cgtagcccc acgttctgct tcactctccc catctcccc ccctccccac 60
ccccaatttt gtatttattt attttttaat tattttgtgc agcgatgggg gcgggggggg 120
ggggggggcg cgcgccaggc ggggcggggc ggggcgagg gcggggcggg gcgaggcgga 180
gaggtgcggc ggagccaat cagagcggcg cgctccgaaa gtcccttta tcgcgaggcg 240
gcggcgggcg cgccctata aaaagcgaag cgcgcgggcg ccgggagtcg ctgcgacgct 300
gccttcgccc cgtgcccaacc tccgcctcga gcttacctga actaatttt tagaatatta 360
aaatcctaag cttttatact cctatccctc tatcttttgc tctctatcca atttttatta 420
acttagactt taaaaagaaa cttatgagaa aaatttccgc ggaacattat tataacgttg 480
ctcgaatact aactggtacc tcttctttt tttttgatat cctgcag 527

<210> 109
<211> 169
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequence not included in construct

<400> 109
cgccgctcgc cgccgcccgc cccggctctg actgaccgcg ttactccac aggtgagcgg 60
gcgggacggc ccttctctc cgggctgtaa ttagcgcttg gtttaatcac ggcttgtttc 120
tttctgtgg ctgcgtgaaa gccttgagg gctccgggag gaattcgta 169

<210> 110
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> F8 PTM sequences

<400> 110
ggagtcgctg cgacgctgcc ttcgccccgt gccaacctcc gc 42

<210> 111
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> F8 PTM sequences

<400> 111
ctcgagcacc gatatcgtaa ct 22

<210> 112
<211> 53
<212> DNA
<213> Artificial Sequence

<220>

<223> Exon 26, Flag tag, stop sequences of mouse factor
VIII PTM

<400> 112
gaggcccagc agcaatacga ctacaaggac gacgatgaca agtgagttta aac 53

<210> 113
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> Spacer sequences of human or canine factor VIII
PTM

<400> 113
ccgcggaaca ttattataac gttgctcgaa tactaactgg tacctcttct tttttttttg 60
atatcctgca g 71

<210> 114
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Branch point and polypyrimidine tract sequences of
human papilloma virus PTM

<400> 114
tactaactgg tacctcttct tttttttttg atatcctgca gggcggc 47

<210> 115
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Branch point and polypyrimidine tract of human
papilloma virus PTM

<400> 115
tactaactgg tacctcttct tttttttttg atatcctgca gggcggc 47

<210> 116
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 116
cagttaatac acctaattaa caaatcacac aacgctttgt tgtattgctg ttctaattgt 60
gttccataca cactataaca 80

<210> 117
<211> 149
<212> DNA
<213> Artificial Sequence

<220>
 <223> Binding domain of human papilloma virus PTM

 <400> 117
 cagttaatac acctaattaa caaatcacac aacgctttgt tgtattgctg ttctaattgtt 60
 gttccataca cactataaca ataatgtcta tactcactaa ttttagaata aaacttttaa 120
 catttatcac atacagcata tcgattccc 149

 <210> 118
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Binding domain of human papilloma virus PTM

 <400> 118
 gatgatctgc aacaagacat acatcgaccg gtcca 35

 <210> 119
 <211> 104
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Binding domain of human papilloma virus PTM

 <400> 119
 cttcaggaca cagtggcttt tgacagttaa tacacctaat taacaaatca cacaacggtt 60
 tgttgatttg cagttctatg ttgttccata cacactataa caat 104

 <210> 120
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Binding domain of human papilloma virus PTM

 <400> 120
 gatgatctgc aacaagac 18

 <210> 121
 <211> 99
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Binding domain of human papilloma virus PTM

 <400> 121
 gacacagtgg cttttgacag ttaatacacc taattaacaa atcacacaac gggtttgttgt 60
 attgcagttc taatgttgtt ccatacacac tataacaat 99

 <210> 122
 <211> 138
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Binding domain of human papilloma virus PTM

<400> 122

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gatgatctgc aacaagacat acatcgaccg gtccacttca ggacacagtg gcttttgaca 60
gttaatagac ctaattaaca aatcacacaa cggtttggtg tattgcagtt ctaatgttgt 120
tccatacaca ctataaca                                     138
```

<210> 123

<211> 89

<212> DNA

<213> Artificial Sequence

<220>

<223> Binding domain of human papilloma virus PTM

<400> 123

```
gatgatctgc aacaagacga cacagtggct tttgacagtt aatacaccta attaacaaat 60
cacacaacgg tttgttgtat tgcagttct                                     89
```

<210> 124

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> Trans-spliced product

<400> 124

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agaatgtgtg tactgcaagc aacagttact gcgacgtgag ggcggcttcg tctgggactg 60
ggtgga                                             66
```

<210> 125

<211> 71

<212> DNA

<213> Artificial Sequence

<220>

<223> Trans-spliced product

<400> 125

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gtgtactgca agcaacagtt actgcgacgt gagggcggct tcgtctggga ctgggtggat 60
cagtcgctga t                                             71
```

<210> 126

<211> 500

<212> DNA

<213> Artificial Sequence

<220>

<223> Reverse complement of trans-spliced product comprising cystic fibrosis transmembrane regulator-derived sequences and His tag sequences

<400> 126

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gtgggagtgg caccttccag ggtcaaggaa ggcacggggg aggggcaaac aacagatggc 60
tggcaactag aaggcacagt cgaggctgat cagcggttta aacttaagct tggtagcgag 120
ctcggatcca ctagtccagt gtggtggaat tctgcagata tccagcacag tggcggccgc 180
```

```

ctaattgatga tgatgatgat gctcttctag ttggcatgct ttgatgacgc ttctgtatct 240
atattcatca taggaaacac caaagatgat attttcttta atggtgccag gcataatcca 300
ggaaaactga gaacagaatg aaattcttcc actgtgctta attttaccct ctgaaggctc 360
cagttctccc ataatcatca ttagaagtga agtctgcagg aaaaaaaga agaggtacca 420
gttagtactc gagcaacgtt ataataatgt tccgcggata atgacctaata atgatgggt 480
gggcccgttt aaacgctagc                                     500

```

<210> 127

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> 3'end of trans-spliced product comprising cystic fibrosis
transmembrane regulator-derived sequences and His
tag sequences

<400> 127

gctagcgttt aa

12

<210> 128

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> 5'end of trans-spliced product comprising cystic fibrosis
transmembrane regulator-derived sequences and His
tag sequences

<400> 128

tgccactccc ac

12